CLAIMS

What is claimed is:

1.   A method for mirroring data comprising:

receiving a data access request from a client coupled to a first storage

sever;

transmitting the access request to a second storage server; and

writing the access request to a data container corresponding to the first

storage server on the second storage server.

2.   The method of claim 1, wherein writing further comprises writing the

access request to a memory on the second storage server, and transferring the

access request to the data container on a nonvolatile mass storage device

coupled to the second storage server when the memory is full.

3.   The method of claim 2, further comprising the second storage server

receiving a synchronization request from the first storage server, and

updating an image of a volume maintained by the first storage server on a

second nonvolatile mass storage device coupled to the second storage server

using the access request.

4.   The method of claim 1, further comprising:

sending an acknowledgement from the second storage server to the

first storage server in response to receiving the access request; and

sending a response from the first storage server to the client in

response to receiving the acknowledgement and after the access request has

been stored on the first storage server and stored in the data container.

5.   The method of claim 2, further comprising:

partitioning the memory into a first portion and second portion; and

wherein said writing comprises writing the access request to a first

portion of the memory, and when the memory is full, writing the first portion

of the memory to the data container.

6.   The method of claim 5, further comprising:

writing the access request to a second memory on the first storage

server upon receiving the access request; and

updating the first storage server using the access request in response to

the synchronization request.

7.   The method of claim 1, wherein transmitting the access request

comprises transmitting the access request from the first storage server to the

second storage server over a network.

8.   The method of claim 2, further comprising:

assigning a sequence number to the access request, wherein the

sequence number designates a position of the access request in a group of

access requests to ensure that the access request is properly ordered within

the data container.

9.   The method of claim 1, wherein the data container is a file.

10.   An apparatus comprising:

a destination storage server to mirror data stored by a source storage

server;

a network interface on the destination storage server coupled to the

source storage server, the network interface to receive a data access request

from a client coupled to the source storage server; and

wherein the destination storage server is configured to write the data

access request to a data container corresponding to the source storage server.

11.   The apparatus of claim 10, wherein the first and second storage servers

are coupled together by a network through the network interface.

12.   The apparatus of claim 11, wherein the network comprises a

Transmission Control Protocol/Internet Protocol (TCP/IP) network.

13.   The apparatus of claim 10, further comprising a memory on the destination storage server to receive the access request, wherein the data container is written to a nonvolatile mass storage device coupled to the destination storage server when the memory is full.

14.   The apparatus of claim 13, wherein the memory comprises a nonvolatile random access memory (NVRAM).

15.   The apparatus of claim 10, wherein the destination storage server modifies an image of a volume maintained by the source storage server on a second nonvolatile mass storage device coupled to the destination storage server according to the access request when the source storage server makes a synchronization request.

16.   The apparatus of claim 10, wherein the data container is a file.

17.   A method comprising:

receiving a data access request from a client coupled to a source filer;

writing the access request to a first memory coupled to the source filer;

transmitting the access request to a destination filer through a network;

sending an acknowledgement to the source filer in response to the destination filer receiving the access request;

writing the access request to a file corresponding to the source filer on a volume coupled to the destination filer, wherein writing the access request to a file includes writing the access request to a second memory coupled to the destination filer, transferring the access request to the volume, and removing the access request from the second memory; and

sending a response to the client to indicate receipt of the data access request.

18.   The method of claim 17, further comprising:

receiving a second data access request from a second client coupled to a second source filer;

writing the second access request to a third memory coupled to the second source filer;

transmitting the second access request to the destination filer through the network;

sending a second acknowledgement to the second source filer in response to the destination filer receiving the second access request;

writing the second access request to a second file corresponding to the second source filer on the volume coupled to the destination filer, wherein writing the second access request to a second file includes writing the second access request to the second memory, transferring the second access request to the volume, and removing the second access request from the second memory; and

sending a second response to the second client to indicate receipt of the data access request.

19.   The method of claim 17, further comprising connecting the second filer to the client in response to a system failure.

20.   The method of claim 17, further comprising:

applying the access request to an image of a volume maintained by the first filer; and

allowing the client to access the image.